

## LOKAD – MARCH 2017

Air France industries gave themselves 1 year to change their vision of supply chain with Lokad. Mission accomplished.

Air France Industries' (AFI) technical and logistical support spans more than 1000 airplanes, making AFI a major player in the aerospace industry. With the standards for service quality objectives constantly being raised, inventory and logistics optimization are now, more than ever, a key challenge for AFI. A challenge for which they couldn't find a suitable answer when calling on traditional aerospace software companies.

AFI chose to trust Lokad after their successful cooperation with Spairliners – a joint-venture between Air France Industries and Lufthansa Technik. Lokad is a new actor in the aerospace market; which positions itself not as a general inventory management solution, nor as a statistics toolbox, but more specifically as a specialist in inventory optimization.

*Through rapid assimilation of our specific needs, combined with great adaptiveness and reactivity, Lokad has been able to deliver a solution that fits the MRO market, and therefore Air France Industries' expectations perfectly.*

**Nicolas Kuhn**  
Project Manager, Inventory Optimization  
AIR FRANCE INDUSTRIES

## LOKAD'S APPROACH

Quantitative Supply Chain:  
Cloud Computing and Machine Learning combined for probabilistic forecasting

First and foremost, Lokad embraces a radically different vision of Supply Chain. Lokad's predictive technology is based on complex statistical analyses, where Big Data

## IN A NUTSHELL

Project lift-off in Autumn 2015

■  
6-month implementation

■  
6-month analysis of results in production

■  
**Deliverables:**  
investment and disinvestment lists, dispatch and MBK suggestions

## OUTCOME

- Timely completion of the project
- A virtuous circle of divestments and investments. A progressive reduction of overstock.

**14 M€**

of divestments over 6 months.

A foreseen total of **27 M€** between now and the end of the year.

- Optimization of stock dispatch across the various centers
- A radical new approach to optimize pool availability

**INCREASED SERVICE LEVEL  
AND GREATER CONTROL  
OVER INVESTMENTS**

meets Machine Learning, with masses of data to process – up to a decade of historical data on AFI’s logistics operations, spread over nearly a dozen major applications. This is why Lokad’s software solution is hosted on Microsoft’s cloud computing platform, Azure, and is handled in SaaS mode.

This vision takes as its starting point the fact that, in general, all aerospace predictions are based on mean and average statistical predictions. Lokad’s founder, Joannès Vermorel, believes that aerospace issues don’t fit in with this type of forecasting, because averages and medians completely neglect the extremes, that is, unexpected excesses or sudden falls in demand, triggering respectively AOG incidents, and overstock or write-offs. At the heart of Lokad’s technology is **a probabilistic forecasting engine, which allows not just the forecast of a unique scenario, but of all possible scenarios**, and assigns each scenario an estimated probability.

Instead of calculating working stock and safety stock levels, Lokad generates a list that is both more precise and more ergonomic, which allows decisions to be fully prioritized.

This approach makes it possible to deliver prioritized lists for investments or divestments, and provides a better global overview of stock efficiency, both in terms of availability and ROI.

Beyond this probabilistic vision of forecasting, according to Lokad, there is one basic principal to be held: **align the technology with the key industry drivers**, and not the opposite. For this reason, Lokad depends on a “programmatic” approach of aerospace’s logistics modelization and inventory optimization.

Thanks to this approach, Lokad is able to align its solution with the operations by taking into account all the various complexities (TAT variations, shelf-life, 1-way and 2-way compatibilities, maintenance schedules, repair Bills of Materials, ...).

Therefore, Lokad’s approach demonstrates great flexibility and embraces to the greatest extent the processes, the sector’s reality of operations and the existing data.

Lokad’s solution is in no way a replacement for existing ERPs, but rather a complementing force, which adds a layer that is entirely dedicated to advanced logistics analysis and optimization.

*Lokad brings a new tool to the table, one that is both powerful and innovative. But on top of that, Lokad has shared with Air France Industries its expertise in inventory optimization and Supply Chain management, thus bringing not only a complementary IT solution but also a real consulting expertise, which our teams can rely on.*

**Charles Segondat**

A320 Fleet Technical Manager  
AIR FRANCE INDUSTRIES